

IN THE CLAIMS

Please amend claims 1, 12-19, 29-37, 44-45 as indicated below.

1. (Currently Amended) A method for routing messages comprising:
converting a message received from a sender into an internal format comprising at
least an attribute part and a data part[,];
writing into said attribute part data extracted from said received message and data
indicative of a protocol by which the message was received; and
routing said converted message in dependence on the data in said attribute part.
2. (Original) The method of claim 1, comprising identifying the format in which the
message was received, and writing data identifying that format into said attribute part.
3. (Original) The method of claim 1, comprising determining where to send the
message in dependence on the attributes.
4. (Original) The method of claim 1, comprising authenticating the identity of the
sender of the message.
5. (Original) The method of claim 1, comprising identifying a set of services to
which the message is addressed.
6. (Original) The method of claim 4, comprising determining whether the sender is
authorised to access at least one service; and,
in dependence on the result of said authorisation determination, sending the converted
message to the identified service.
7. (Original) The method of claim 6, in which said identified service updates the
data held in the attribute part of the message.

8. (Original) The method of claim 6, comprising storing a plurality of routing rules and in which determining whether the sender is authorised to access at least one service comprises comparing said plurality of routing rules with the attributes of a converted message.
9. (Original) The method of claim 1, wherein said received message comprises a digital signature, the method comprising verifying the signature.
10. (Original) The method of claim 9, comprising writing into said attribute part data identifying the received digital signature.
11. (Original) The method of claim 1, comprising storing a plurality of routing rules; comparing the attributes of a converted message with the routing rules; and routing said converted message in dependence on said comparison.
12. (Currently Amended) The method of claim 1, further comprising:
determining whether there exists a transaction identifier associated with the
received message, the message corresponding to a transaction; and
generating a transaction identifier for the message in response to determining no
transaction identifier associated with the message exists comprising
~~searching for a transaction identifier in the received message.~~
13. (Currently Amended) The method of claim 12, further comprising:
utilizing a transaction identifier associated with the message to determine whether
there exists a previously stored context which indicates a state of the
transaction; and
creating a context associated with the message in response to determining no
context exists for the message.
~~comprising allocating a new transaction identifier if no transaction identifier is detected~~
~~in the received message.~~

14. (Currently Amended) The method of claim ~~12~~ 13, wherein the transaction comprises a series of messages, and wherein the method further comprises updating a context associated with the transaction as the series of messages are processed. ~~comprising, if a transaction identifier is detected, searching for data identifying the status of a transaction by reference to the detected transaction identifier.~~

15. (Currently Amended) A program element comprising program code for configuring a computer system to route a message, the program code operable to:
convert a message received from a sender into an internal format comprising at least an attribute part and a data part;
write into said attribute part data extracted from said received message and data indicative of a protocol by which the message was received; and
route said converted message in dependence on the data in said attribute part.

16. (Currently Amended) A program element comprising program code translatable to configure a computer system to route a message, the program code operable to:
convert a message received from a sender into an internal format comprising at least an attribute part and a data part;
write into said attribute part data extracted from said received message and data indicative of a protocol by which the message was received; and
route said converted message in dependence on the data in said attribute part.

17. (Currently Amended) A computer-readable medium encoded with computer-readable program code for configuring a computer system to route a message, the program code operable to:
convert a message received from a sender into an internal format comprising at least an attribute part and a data part;
write into said attribute part data extracted from said received message and data indicative of a protocol by which the message was received; and
route said converted message in dependence on the data in said attribute part.

18. (Currently Amended) A computer-readable medium encoded with computer-readable program code translatable to configure a computer system to route a message, the program code operable to:

convert a message received from a sender into an internal format comprising at least an attribute part and a data part;

write into said attribute part data extracted from said received message and data indicative of a protocol by which the message was received; and

route said converted message in dependence on the data in said attribute part.

19. (Currently Amended) A computer system for routing messages to one or more services comprising:

a parser for converting a message received from a sender into an internal format comprising an attribute part and a data part, said attribute part containing data extracted from the received message and data indicative of a protocol by which the message was received; and

a router for routing the converted message in dependence on the data in said attribute part.

20. (Original) The computer system of claim 19, in which said parser is configured to identify the format in which the message was received, and to write data identifying that format into said attribute part.

21. (Original) The computer system of claim 19, in which said router is configured to determine where to send the message in dependence on the attributes.

22. (Original) The computer system of claim 19, in which said the router is configured to authenticate the identity of the sender of the message.

23. (Original) The computer system of claim 19, in which said router is configured to identify a set of services to which the message is addressed.

24. (Original) The computer system of claim 19, in which said router is configured to: identify at least one service to which the message should be sent; determine whether the sender is authorised to access said identified service; and, in dependence on the result of said authorisation determination, selectively send the converted message to the identified service.

25. (Original) The computer system of claim 19, said router being configured to store a plurality of routing rules and to determine whether the sender is authorised to access a service by applying said rules to the attributes of a converted message.

26. (Original) The computer system of claim 19, wherein said parser is configured to verify signatures included in said received messages.

27. (Original) The computer system of claim 19, said parser comprising a plurality of applications for converting said received message, said parser selecting at least one of said applications in dependence on the data extracted from said received message.

28. (Original) The computer system of claim 27, wherein said data extracted from said received message includes a message type, said parser selecting at least one of said applications in dependence on the type of a message.

29. (Currently Amended) The computer system of claim 27, wherein said data extracted from said received message includes protocol data, and said parser selects at least one of said applications in dependence ~~or~~ on the protocol(s) under which the message was received.

30. (Currently Amended) The computer system of claim 19, wherein the parser is further configured to: determine whether there exists a transaction identifier associated with the received message, the message corresponding to a transaction; and

generate a transaction identifier for the message in response to determining no transaction identifier associated with the message exists ~~configured to search for a transaction identifier in the received message.~~

31. (Currently Amended) The computer system of claim 30, wherein the parser is further configured to:

utilize a transaction identifier associated with the message to determine whether there exists a previously stored context which indicates a state of the transaction; and

create a context associated with the message in response to determining no context exists for the message ~~configured to allocate a new transaction identifier if no transaction identifier is detected in the received message.~~

32. (Currently Amended) The computer system of claim 30 ~~31~~, wherein the transaction comprises a series of messages, and wherein the method further comprises updating a context associated with the transaction as the series of messages are processed ~~configured to search for data identifying the status of a transaction by reference to the detected transaction identifier.~~

33. (Currently Amended) A The computer system of claim 19, further comprising ~~configured to provide a plurality of protocol handlers each configured to extract protocol data from a message received in a particular format.~~

34. (Currently Amended) A The computer system according to ~~of~~ claim 33, configured to select a protocol handler for extracting data from a received message, in dependence on the format in which the message is received.

35. (Currently Amended) A The computer system according to ~~of~~ claim 33 configured to select a protocol handler in dependence on the type of data in the received message.

36. (Currently Amended) A The computer system ~~according to~~ of claim 35, in which said protocol handler extracts message level protocol data and writes this into the attribute part of the converted message.

37. (Currently Amended) A computer program for routing messages, said program comprising computer executable instructions for converting a message received from a sender into an internal format comprising at least an attribute part and a data part, writing into said attribute part data extracted from said received message and data indicative of a protocol by which the message was received; and routing said converted message in dependence on the data in said attribute part.

38. (Original) The computer program of claim 37, comprising computer executable instructions for identifying the format in which the message was received, and writing data identifying that format into said attribute part.

39. (Original) The computer program of claim 37, comprising computer executable instructions for determining where to send the message in dependence on the attributes.

40. (Original) The computer program of claim 37, comprising computer executable instructions for authenticating the identity of the sender of the message.

41. (Original) The computer program of claim 37, comprising computer executable instructions for identifying a set of services to which the message is addressed.

42. (Original) The computer program of claim 37, comprising computer executable instructions for determining whether the sender is authorised to access at least one service; and,
in dependence on the result of said authorisation determination, sending the converted message to the identified service.

43. (Original) The computer program of claim 37, comprising computer executable instructions for searching for data identifying the status of a transaction by reference to a detected transaction identifier.

44. (Currently Amended) A computer system for routing messages to one or more services, comprising:

means for parsing a message received from a sender;

means for parsing including means for converting the message into an internal format comprising an attribute part and a data part, said attribute part containing data extracted from received message and data indicative of a protocol by which the message was received; and

means for routing the converted message in dependence on the data in the attribute part.

45. (Currently Amended) A computer network comprising at least one computer system connectable to at least one further computer system via a network, the at least one computer system comprising:

a parser for converting a message received from a sender into an internal format comprising an attribute part and a data part, said attribute part containing data extracted from the received message and data indicative of a protocol by which the message was received; and

a router for routing the converted message in dependence on the data in said attribute part.